

ACCESSION NR: AP4036526

naturally occuring isotopic ratio. Orig. art. has: 1 figure

ASSOCIATION: None

SUBMITTED: 22Jul63

DATE ACQ: 03Jun64

ENCL: 01

SUB CODE: NP, GG

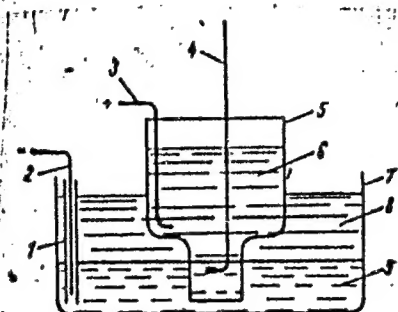
NO REF SOV: 003

OTHER: 002

Card 2/3

ACCESSION NR: AP4036526

ENCLOSURE: 01



Polyethylene two-chamber electrolytic cell:

1 - glass tube, 2 - iron electrode, 3 - platinum electrode, 4 - polyethylene stirrer, 5 - upper bottomless polyethylene chamber, 6 - working solution, 7 - lower polyethylene chamber, 8 - water and sulfuric acid, 9 - mercury

Card

3/3

KUKAVADZE, G.M.; MEMELOVA, L.Ya.; SUVCROV, L.Ya.

Search for anomalous hydrogen. Zhur. eksp. i teor. fiz. 49 no.2:  
389-392 Ag '65. (MIRA 18:9)

1. Institut teoreticheskoy i eksperimental'noy fiziki.

GRISHANIN, Ye.I.; KUKAVADZE, G.M.; LEPENDIN, V.I.; MAMELOVA, L.Ya.;  
MOROZOV, I.G.; ORLOV, V.V.; PILIPETS, D.T.

Measurement of the absorption cross section for  $Gd^{156}$ . Atom.  
energ. 19 no.5:459-460 N '65. (MIRA 18:12)

L 16724-66 EWT(m) DIAAP

ACC NR: AP6008460

SOURCE CODE: UR/0089/65/019/005/0459/0460

AUTHOR: Grishanin, Ye. I.; Kukavadze, G. M.; Lependin, V. I.; Mamelova, L. Ya.;  
Morozov, I. G.; Orlov, V. V.; Pilipets, D. T.

ORG: none

TITLE: Measurement of the absorption cross section of <sup>156</sup>Gd

SOURCE: Atomnaya energiya, v. 19, no. 5, 1965, 459-460

TOPIC TAGS: gadolinium, neutron cross section, thermal neutron, neutron irradiation, mass spectrometer, neutron spectrum, nuclear reactor, neutron

ABSTRACT: Samples of gadolinium oxide were irradiated in a reactor with thermal neutrons to various integral fluxes. The thermal-neutron absorption cross section of <sup>156</sup>Gd was determined from the values of the <sup>156</sup>Gd and <sup>157</sup>Gd concentrations in the irradiated samples, measured on a mass spectrometer, and the value of the <sup>157</sup>Gd absorption cross section, obtained by averaging the cross section from resonance parameters over the neutron spectrum of the reactor. The cross section for 0.025-eV neutrons was found to be  $13 \pm 3$  barns. [NA]

SUB CODE: 18, 20 / SUBM DATE: 02Apr65 / OTH REF: 003

Card 1/1

L 27870-66 EWT(m)/EPF(c)/T/EWP(t)/EWP(b)/EWA(m)-2 IJP(c) JD  
 ACCESSION NR: AP5021097 UR/0056/65/049/002/0389/0392

AUTHOR: Kukavadze, G. M.; Memelova, L. Ya.; Suvorov, L. Ya.

TITLE: Search for anomalous hydrogen

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 2, 1965, 389-392

TOPIC TAGS: hydrogen, deuterium, isotope, mass spectrometry/ MI 1311-04

ABSTRACT: An attempt was made to detect with the aid of a mass spectrometer elementary particles of mass greater than that of the proton. The MI 1311-04 mass spectrometer was subjected for this purpose to additional tests, to ascertain its maximum sensitivity and best resolution. By using an electron multiplier as both ion collector and first amplification stage, ion currents as low as  $10^{-18}$  amp could be measured. In a vacuum of  $2 \times 10^{-7}$  mm Hg and at a background current of  $2 \times 10^{-18}$  amp, the resolution of the mass spectrometer at 5% mass-spectrum line intensity was found to be 500. After establishing the exact characteristics of the instrument, the authors undertook a search for anomalous stable hydrogen in atmospheric air, hydrogen, and deuterium. The results have established that if the mass of the wild hydrogen is larger than the mass of deuterium, then its concentration in the earth's atmosphere can be less than  $1.5 \times 10^{-12}$ , and if the mass

Card 1/2

09011078

L 27870-66

ACCESSION NR: AP5021097

6

of the wild hydrogen lies between that of ordinary hydrogen and deuterium, its maximum concentration should range from  $1 \times 10^{-8}$  to  $1.5 \times 10^{-12}$ . The lines corresponding to mass-5 in concentrated water, which might be ascribed to anomalous hydrogen, are shown to be due to  $HD_2^+$  ions. It is recommended that earlier mass spectrograms be reviewed to search for lines which at that time were not identified with definite masses. "The authors thank L. B. Okun for providing the initiative for this work, B. V. Ershler, B. Z. Torlin, and R. L. Serdyuk for useful discussions, and A. A. Belonozhenko for help with the measurements." Orig. art. has: 1 table.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki (Institute of Theoretical and Experimental Physics)

SUBMITTED: 01Mar65

ENCL: 00

SUB CODE: NP, GP

NR REF SOV: 002

OTHER: 002

Card 2/2 20

KUKAVADZE, N.M.

Evolution of some forms of the genus *Cordium* in the Eocene  
age. Soob. AN Gruz. SSR 34 no.1:107-110 Ap'64 (MIRA 17:7)

1. Institut paleobiologii AN Gruzinskoy SSR. Predstavleno  
akademikom L.Sh. Davitashvili.



KUKAVICIC, Rade

Cooperation of the commercial technical services of the  
Jugovinil Plant with consumers. Kemija u industriji no.5:  
271-272 My '62.

SAMOYLOV, Georgiy Pavlovich; KUKAYEV, A.A., otv. red.; TSEYTLIN,  
F.G., red.; TRISHINA, L.A., tekhn. red.

[Installation and operation of receiving television  
antennas] Priemnye televizionnye anteny, ikh ustroistvo i  
ekspluatatsiia. Moskva, Sviaz'izdat, 1963. 135 p. (Bib-  
lioteka "Televizionnyi priem," no.8) (MIRA 16:10)  
(Television--Antennas)

FIEBRANTS, Avgust [Fiebranz, August]; KUKAYEV, A.A., otv. red.;  
TSEXTLIN, F.G., red.

[Antenna devices for the reception of radio and television  
broadcasts. Translated from the German] Antennye ustroistva  
dlia priema televideniia i radioveshchaniia. Moskva, I:  
vo "Sviaz," 1964. 248 p. (Biblioteka "Televizionnyi priem,"  
no.12) (MIRA 17:7)

KUKAREV, P. K.

✓ 170. Science and technique in the Soviet Union telemechanical operation of pumping equipment taking water from underneath a river bed. P. K. Kukarev and N. D. Gerdun. *Hydro-*  
mechanics, 1957, 18, 44-5. 2 refs. in English. The authors describe a telemechanical system for the operation of pumping equipment which permits the water level in the river to be maintained at a certain level. The system is used for the operation of the River Is. The authors state that the system is a small station and has been operating efficiently since 1954.

NEVEL'SON, M.I.; NIKIFIN, A.I.; YANISHEVSKIY, V.V.; BOYKO, G.G.; KUZNETSOV,  
N.I.; BULANOVA, I.A.; GORSHKOV, V.I.; KATSMAN, I.A.; KUKAYEVA, YE.V.;  
RYZHOVA, V.V.; TUROBOVA, V.I.; CHEREDEYEVA, Ye.M.; KOSHELKIN, M.V.

Development of highly efficient ventilator models ORGRES operating  
according to a 0.68-161° system for electric power plants. Prem.  
energ. 18 no.7:8-9 JI '63. (MIRA 16:9)

(Electric power plants—Electric equipment)  
(Fans, Electric)

ALEKSANDROVA, M.; GINTER, V.[Gintere, V.]; INDULEN, M.[Insulena, M.];  
KANEL', I.[Kanele, I.]; KONDRASHOVA, M.; KUKAYN, G.[~~Kukaina, G.~~]

Virological and serologic studies of live vaccine against polio-  
myelitis. Report II. Vestis Latv ak no.6:153-158 '60.  
(EEAI 10:9)

(POLIOMYELITIS) (VACCINES AND VACCINATION)

KUKAYN, R. [Kukaine, R.]

Second Soviet-American Conference on Poliomyelitis. Ventis  
Latv ak no.4:145-146 '62.





KUKAINE, R.; Feldmane, G.

Study of effectiveness of intercutaneous vaccination against poliomyelitis.  
In Russian. p. 83.

LATVIAS PSR ZINATNU AKADEMIJA. VESTIS. RIGA, LATVIA. No. 3, 1959

Monthly List of East European Accessions. (EEAI) LC, Vol. 9, no. 2,  
Feb. 1960 Uncl.

KUKAINE, R.; Lavrov, M.; Feldmane, G.

Application of albumin hydrolyzates of aminopeptide 2 and Aminokrovin for cultivation of tissues. p. 113.

LATVIJAS PSR ZINATNU AKADEMIJA. VESTIS. RIGA, LATVIA. No. 7, 1959

Monthly List of East European Accessions. (EEAI) LC, Vol. 9, no. 2, Feb. 1960 Uncl.

ALEKSANDROVA, M. (Riga); KONDRASHOVA, M. (Riga); KUKAIN, R. [Kukaine, R.]  
(Riga)

Antibody neutralizing of the poliomyelitis virus in certain age  
groups of Riga inhabitants. Vestis Latv ak no.1:135-144 '60.  
(EEAI 9:11)

1. Akademiya nauk Latviyskoy SSR, Institut mikrobiologii.  
(LATVIA--POLIOMYELITIS)  
(ANTIGENS AND ANTIBODIES)

ALEKSANDROVA, M. (Riga); INDULEN, M. (Riga); KALNIN', B. [Kalnina, B.] (Riga);  
KANEL', I. [Kanele, I.] (Riga); KONDRASHOVA, M. (Riga); KUKAIN, R.  
[Kukainis, R.] (Riga)

Virological and serologic studies in connection with the inoculation  
with live vaccine against poliomyelitis in Latvia; a preliminary  
report. Vestis Latv ak no.2:149-152 '60. (EEAI 10:1)

1. Akademiya nauk Latviyskoy SSR, Institut mikrobiologii.  
(LATVIA--POLIOMYELITIS)

KUKAYN, Rita Aleksandrovna [Kukaine, R.]; TEYTEL'BAUM, I. [Teitelbaum, A.], red.;  
LEMBERGA, A., tekhn. red.

[Immunology and prospects for the extermination of poliomyelitis in the Latvian S.S.R.] Imminologija i perspektivy likvidatsii poliomiellita v Latviiskoi SSR. Riga, Izd-vo Akad. nauk Latviiskoi SSR, 1961. 169 p. (MIRA 15:3)  
(LATVIA-POLIOMYELITIS)

KUKAYNE, R.[Kukaine, R.]

Conference on the problem of poliomyelitis and poliomyelitis-like diseases. Vestis Latv ak no.6:169-170 '61.

(POLIOMYELITIS--CONGRESSES)

KUKAYN, R.A.[Kukain, R.], kand. med. nauk, red.; PLANDER, E.M.[Planders, E.],  
kand. med. nauk, red.; LAGANOVSKIY, S.Ya., kand. biol. nauk, red.;  
PAVLOVICH, D.Ya., kand. biol. nauk, red.; YAKOBSON, Yu.O.  
[Jakabsons, J.], kand. biol. nauk, red.; SHKLENNIK, Ch., red.;  
PILADZE, Ye.[Piladze, E.], tekhn. red.

[Micro-organisms and the environment] Mikroorganizmy i sreda. Riga,  
Izd-vo Akad. nauk Latviskoi SSR, 1962. 142 p. (MIRA 16:2)

Latvijas Padomju Socialistiskas Republikas Zinatnu Akademija.  
Mikrobiologijas instituts.  
(MICRO-ORGANISMS)

KUKAYN, R. [Kukaine, R.]; INDULEN, M. [Indulēna, M.]; KANEL', I. [Kanele, I.];  
KONDRASHOVA, M.; KALNINYA, B. [Kalnina, V.]; VOLRAT, A. [Volrate, A.];  
FELDMAN, G. [Feldmane, G.]; NAGAYEVA, L.; PAVLOVA, M.; POPOVA, V.

Characteristics of the tuberculin tests in children inoculated  
during early infancy with peroral BCG vaccine and live poliomyelitis  
vaccine. Vestis Latv ak no.7:115-117 '62.

1. Institut mikrobiologii AN Latvyskoy SSR.



KUKAYN, R.A.; YAKOBSON, Yu.O.

Augusts Kirchens; on hist 90th birthday. Mikrobiologiya 31  
no.6:1136-1138 N-D '62. (MIRA 16:3)  
(KIRCHENSTEINS, AUGUSTS, 1872-)

KUKAYNE, R.A. [Kukaine, R.], doktor med.nauk

Present-day natural science and the problems of dialectical-  
materialistic methodology. Izv.AN Latv.SSR no.12:36-38 '63.  
(MIRA 17:3)

BEKER, M.Ye., kand. tekhn. nauk, red.; VIYESTURS, U.R. [Viesturs, U.]  
red.; DAMBERGA, B.A., kand. biol. nauk, red.; KUKAYN, R.A.,  
[Kukains, R.], doktor med. nauk, red.; KARKLIN<sup>SH</sup>, R.Ya.  
[Karklins, R.], kand. tekhn. nauk, red.; STURIS, T.E., red.;  
YAKOBSON, Yu.O. [Jakobsons, J.], kand. biol. nauk, red.

[Microbiological processes and production] Mikrobiologicheskie protsessy i proizvodstvo. Riga, Izd-vo AN Latv.SSR, 1964. 153 p. (MLA 17:8)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu Akademijs. Mikrobiologijas instituts.

GHUMAKOV, M.P.; VOROSHILOVA, M.K.; DZAGUROV, S.G.; DROZDOV, S.G.;  
LASHKEVICH, V.A.; MIRONOVA, L.L.; RAL'F, N.M.; SINYAK, K.M.;  
BARTOSHEVICH, Ye.N.; VASIL'YEVA, K.A.; GAGARINA, A.V.;  
GRACHEV, V.P.; ZHEVANDROVA, V.I.; TARANOVA, G.P.; KOROLEVA, G.A.;  
KUKAYN, R.A.; ROBINZON, I.A.; TYUFANOV, A.V.; EL'BERT, L.B.

Results of mass immunization with live poliomyelitis vaccine  
and the prospects for eradication of this disease. Vest.  
AMN SSSR 18 no.6:5-15 '63. (MIRA 17:1)

KUKAINE, Rita, KRILOVA, N., red.; PILADZE, Z., tekhn. red.

[Poliomyelitis prevention] Poliomiēlita profilakse. Rīga,  
Latvijas PSR Zinatnu akademijas izdevnieciba, 1962. 65 p.  
(MIRA 16:5)

(POLIOMYELITIS VACCINE)

KUKAINE, Rita; JAKOBSONS, Julijs; ROZENBERGA, R., red.

[Vitamins and their sources in nature] Vitamini un to  
avoti daba. Rīga, Latvijas PSR Zinatņu akad. izd-ba,  
1963. 75 p. [In Latvian] (MIRA 17:6)

KUKAYN, R.A. [Kukainis, R.]; YAKOBSON,, Yu.O. [Jakobsens, J.]

Avust Martynovich Kirkhenshtein, 1872-1963; an obituary.  
Mikrobiologiya 33 no.2:376-378 Mr-Apr '64. (MIRA 17:12)

MELEKHINA, V.P.; Prinimali uchastiye: DYUZHEVA, Yu.V., khimik; AGISHEVA, A.S., khimik; KUKAYNA, V.P., khimik; KOSENKOVA, A.M., khimik

Materials for setting up a sanitary protective zone for Klin Thermometer Manufacturing Factory. Uch. zap. Mosk. nauch.-issl. inst. san. i gig. no.6: 41-44 '60. (MIRA 14:10)

1. Klinskaya sanitarnaya epidemiologicheskaya stantsiya (for Agisheva).
  2. Moskovskaya oblastnaya sanitarnaya epidemiologicheskaya stantsiya (for Kukaina, Kosenkova).
  3. Moskovskiy nauchno-issledovatel'skiy institut sanitarii i gigiyeny imeni F.F.Erismana (for Dyuzheva).
- (KLIN--AIR--POLLUTION) (MERCURY--TOXICOLOGY)



KUKAYNIS, inzhener.

Mill for grinding unslaked lime. Rats. i izobr.predl. v stroi  
no.66:3-5 '53. (MIRA 7:9)

(Lime) (Milling machinery)

KUKAYNIS, R. A.

KUKAYNIS, R. A. — "Information on the Problem of the Role of the Spleen in the Blood-Forming Process (In Normal and in Certain Types of Experimental Anemia). Latvian State U, 1951 (Dissertation for the Degree of Candidate of Medical Sciences)

SO: Izvestiya Ak. Nauk Latvyskov. SSR, No. 9, Sept., 1955

KUKEBAYEV, M.M.

Using foam glass in building. Izv.AN Kazakh.SSR.Ser.gor.dela, met.  
stroil. i stroimat. no.10:10-17 '56. (MLRA 10:1)  
(Glass) (Building materials)

KUKEBAYEV, M.M.

Investigation of earthquakeproof building in the Kazakh S.S.R.

Biul. Sov. po seism. no.3:125-129 '57.

(MIRA 11:5)

(Kazakhstan--Earthquakes and building)

S/169/62/000/002/025/072  
D228/D301

AUTHOR: Kukebayev, M. M.

TITLE: The question of selecting a method for experimentally testing the seismic stability of structures

PERIODICAL: Referativnyy zhurnal Geofizika, no. 2, 1962, 20, abstract 2A143 (Tr. Kazakhsk. fil. Akad. str-va i arkhitekt. SSSR, sb. 1 (5), 1959 (1960), 48-56)

TEXT: In an earthquake's initial phase short-period ground oscillations are reckoned to be the most hazardous for rigid structures. Test estimates of a number of structures which experienced deformation in the Ashkhabad earthquake of 1948 showed that there were ground-oscillation accelerations in the range 3400 - 8300 mm/sec<sup>2</sup>. An impulsive transitory load may be taken as the main one for investigating the seismic stability of rigid structures in models. For the investigations it is possible to use specimens with a size 2 - 3 times smaller than their natural dimensions and with a weight of about 2 tons. The shock effect can be accomplished by a pendu- ✓

Card 1/2

The question of selecting ...

S/169/62/000/002/025/072  
D228/D301

lum. The impulse can be applied to the upper part of a sample,  
fixed immovably on a foundation, or to the mobile platform on  
which the specimen is mounted. /-Abstracter's note: Complete trans-  
lation. /

Card 2/2

KUKEBAYEV, N.M.

Some remarks on the "Statute on building in seismic regions."  
Trudy Inst. stroi. i stroimat. AN Kazakh SSR 2:16-19 '59.  
(MIRA 12:10)

(Earthquakes and building)

KUKEBAYEV, M.M.; DOLGIKH, A.N.

Analysis of structural designs of earthquake-proof dwellings.  
Trudy Inst. stroi. i stroimat. AN Kazakh SSR 2:36-50 '59.  
(MIRA 12:10)

(Earthquakes and building)



KUKHBAYEV, M., kand.tekhn.nauk; MUKHTAROV, A., arkhitektor

Large-panel apartment house in Alma-Ata. Zhil.stroi.  
no.6:18-20 Je '60. (MIRA 13:7)  
(Alma-Ata--Apartment houses)

SKRINSKIY, Yu.; KUKEBAYEV, M., kand.tekhn.nauk

Unified frame for public buildings in earthquake districts.  
Zhil. stroi. no.7:10-12 '62. (MIRA 15:9)

1. Glavnyy inzhener masterskoy instituta Kazgorstroyproyekt  
(for Skrinskiy). (Earthquakes and buildings)

KUKEDI, E.

KUKEDI, E. Can we sow wheat after harvesting wheat? p. 5.

Vol. 11, no. 18, Sept. 1956

MAGYAR MEZOGAZDASAG

AGRICULTURE

Budapest, Hungary

So: East European Accession, Vol. 6, No. 5, May 1957

KUKEDI, E.

KUKEDI, E. Data on the growing of sweet Sudanese sorghum. p. 12.

Vol. 11, No. 9, May 1956  
MAGYAR MEZOGAZDASAG  
AGRICULTURE  
Budapest, Hungary

So: East European Accession, Vol. 6, No. 2, Feb. 1957

HUNGARY/Cultivated Plants - Grains.

M-4

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39194

Author : Bajai, J., Kukedi, E.

Inst :

Title : Spring Care and Fertilization of Winter Wheat.

Orig Pub : Magyar mezogazd., 1957, 12, No 3, 8-9.

Abstract : No abstract.

Card 1/1

- 26 -

HUNGARY/Cultivated Plants - Fodders.

!!.

Abs Jour : Ref Zhur - Biol., No 10, 1953, 44163

Author : Kukedi, Endre

Inst : -

Title : Studies on Different Varieties of Sudan Grass.

Orig Pub : Magyar Mezőgazd., 1957, 12, No 8, 15-16

Abstract : The following varieties were studied during 1955-1956: Sweet Sudan grass (variety developed in Mortonvashar), Otechestvennaya common Sudan grass and Soviet varieties. From the group of the common Sudan grass the following were studied: Poltavskaya, Brodskaya 2, Kinel'skaya 90, Krasnodarskaya 1967 and Odesskaya 25. The sweet Sudan grass surpasses all the other varieties both with regard to the yield and with regard to the juiciness and saccharinity. Otechestvennaya common Sudan grass and Odesskaya have lower yield but are distinguished by high feed value and produce good hay. -- F.R. Grabar'

Card 1/1

- 38 -

M

HUNGARY/Cultivated Plants - Grains

Abs Jour : Ref Zhur Biol., No 12, 1958, 53557

Author : Külkedi, Endre

Inst :

Title : The Role of Artificial Fertilizers in Growing Wheat.

Orig Pub : Magyar mezőgazd., 1957, 12, No 15, 6-7

Abstract : No abstract.

Card 1/1

KUKEKOV, G. A.

Kukekov, G. A. "Methods of calculating the basic gas-dynamic characteristics of gas-pressure off-switches," Trudy Leningr. politekhn. in-ta im. Kalinina, 1948, No. 3, p. 180-87.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statoy, no. 18, 1947).



KUKEROV, G. A.

USSR/Electricity - Scientists

Feb 53

"Professor A. M. Zaleskiy (In Connection with His 60th Birthday)," N. A. Shatolen,  
L. P. Heyan, M. P. Kostenko, I. A. Zaytsov, Ye. G. Shraukov, M. D. Kazenskiy,  
D. I. Doranskiy, V. A. Belyakov, V. T. Ranno, V. P. Andreyev, L. H. Piotrovskiy,  
B. N. Mikhalev, G. A. Kukokov, Yu. A. Sabinin

Elek-vo, No 2, P 94

Accounts chief events in professional life of Prof Aleksandr Mikhaylovich Zaleskiy,  
born 27 Nov 1892. Long active in field of high-voltage techniques, he has been  
Chairman of Administrative Board of VNIIE since 1945.

PA 248T2

KUKEKOV, G.A., kandidat tekhnicheskikh nauk; SOROKIN, P.G., inzhener.

Extinguishing the arc in installations used for disconnecting direct current circuits of high capacity and high voltage. Elektrichestvo no.10:20-24 0 '53.  
(MLRA 6:10)

1. Leningradskiy politekhnicheskii institut im. Kalinina (for Kukekov).
2. Nauchno-issledovatel'skiy institut postoyannogo toka (for Sorokin).  
(Electric circuits)

KUKEKOV, G. A.

CARD 1 / 2

PA - 1842

SUBJECT  
AUTHOR  
TITLE

USSR / PHYSICS  
KUKEKOV, G. A.

The Volt-Ampere Characteristic of an Electric Arc Cooled in a  
Gap-Shaped Channel.  
Zurn.techn.fis, 26, fasc.11, 2548-2552 (1956)  
Issued: 12 / 1956

The present work brings an approximated derivation of the equation of this characteristic. On the occasion of the extinction of an arc in a gap-like chamber the stem of the arc shifts under the influence of the transversal magnetic field into a zone of the chamber, where its walls form a narrow gap-shaped channel having the width  $\delta$ . If the width of the channel is considerably less than the diameter of the arc, the stem of the arc becomes flat, and its cross section becomes rectangular. The following loss of energy is caused mainly by the thermal contact of the plasma of the arc with the surface of the cooling walls. The convective cooling of the stem of the arc by oppositely directed currents of air plays only an insignificant role in this connection. The present paper bases upon the fact that the temperature in the cross section of the stem of the arc changes only slightly. In that case the equation of the efficiency balance for the stem of the arc has a shape similar to that of the equation of the thermal state of a homogeneous current-carrying system. In an arc the specific electric conductivity  $\kappa$  of the plasma can be computed by means of the equation  $\kappa = A x / \sqrt{T}$ . Here  $x$  denotes the degree of thermal ionization and  $T$  - temperature.

KUKENOV, G. A.,

"Volt-Ampere Characteristics of an Electric Arc Cooled in a Slot-shaped Arc Chute," page 507.

High Voltage Technique, Moscow, Gosenergoizdat, 1958, 664pp  
(Series: Its Trudy, No. 195)

This collection of articles sums up the principal results of investigations and studies made by Prof. A. A. Gorev, Dr. Tech. Sci., and his staff in the field of high voltage phenomena and techniques at LPI (Leningrad Polytech Inst.) It was at this institute that Prof. Gorev completed his higher scientific education and then taught and carried on his investigations in the field until his death in 1953. In 1956, by decree of Min of Higher Education, the High-Voltage Lab. at LPI was named after A. A. Gorev.

8(0)

SOV/112-59-3-4926

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 3, p 90 (USSR)

AUTHOR: Kukekov, G. A.

TITLE: Voltage-Current Characteristic of an Electric Arc Cooled in a Slit  
Channel (Vol'tampernaya kharakteristika elektricheskoy dugi, okhlazhdayemoy  
v shchelevom kanale)

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1958, Nr 195, pp 507-510

ABSTRACT: A calculation of the effect of cross convection on the cooling of an  
arc stream moving in a magnetic field is presented. See also RzhE, 1957,  
16624.

Card 1/1

SOV/105-59-3-5/27

8(3)

AUTHORS:

~~Kukekov, G. A.~~, Candidate of Technical Sciences, Docent,  
Sorokin, P. G., Engineer, Shipulina, N. A., Candidate of Technical  
Sciences (Leningrad)

TITLE:

Switch-off Contactors for High-tension Direct Current Transmission  
Lines (Otklyuchayushcheye ustroystvo dlya liniy postoyannogo toka  
vysokogo napryazheniya)

PERIODICAL:

Elektrichestvo, 1959, Nr 3, pp 24-27 (USSR)

ABSTRACT:

The use and the further development of d.c. long-distance trans-  
mission lines in many respects depends upon the creation of new  
electrical equipment and installations. Such devices include con-  
tactors designed to disconnect powerful and highly inductive high-  
tension d. c. circuits. The principal difficulty encountered in  
this problem consists of the fact that it is much more difficult  
to suppress the flashover arc in d. c. circuits than in a. c. cir-  
cuits. In the course of the investigations carried out in the  
Leningradskiy politekhnicheskii institut im. Kalinina (Leningrad  
Polytechnical Institute imeni Kalinin) and at the Institut postoyan-  
nogo toka (Institute of Direct Current) (Refs 1,2) it was found that  
if the d. c. arc is shunted by an oscillation circuit with cor-  
responding parameters and initial conditions - the current in the

Card 1/3

SOV/105-59-3-5/27

Switch-off Contactors for High-tension Direct Current Transmission Lines

arc changes its direction and hence that it may pass through zero. As was shown by experiments, this provides a means of extinguishing the arc in arc-suppression devices of high-tension alternating current contactors, even if the frequency of the oscillations is somewhat higher (500 - 1000 cycles). In this paper a short analysis of the performance of contactors designed on this principle and a description of the experiments carried out with these contactors is given. This model contactor was tested at the rectifier sub-station of the experimental d.c. transmission line from the Kashira water power station to Moscow. Three test series were carried out. Summary: 1) If a high-tension a.c. arc-suppression device is combined with an oscillation circuit, which shunts the arc generated in the arc-suppression device when the contactor disconnects the line, it is possible to create a device which is able to disconnect high-tension d.c. transmission lines. 2) If the oscillation circuit is designed correspondingly to the arc characteristic, no previous charging of the oscillation circuit capacity is required. 3) At present air contactors are considered to be the most convenient type, because the contacts remain open after disconnecting. The rest charge on the condenser must be destroyed by a special device which is built-in in the contactor. -There are 6 figures and 5 Soviet

Card 2/3

KUKEKOV, Georgiy Aleksandrovich; KRASNOGORODTSEV, S.A., inzh., red.;  
ZHITNIKOVA, O.S., tekhn. red.

[Designing of high-voltage a.c. cutouts] Proektirovanie vykliucha-  
telei peremennogo toka vysokogo napriazheniia. Moskva, Gos. energ.  
izd-vo, 1961. 295 p. (MIRA 14:10)  
(Electric cutouts)



ZALESSKIY, Aleksandr Mikhaylovich; BRON, O.B., prof., retsenzent;  
KUKEKOV, G.A., red.; ZHITNIKOVA, O.S., tekhn. red.

[Electric arc in switching] Elektricheskaya duga otkliucheniya.  
Moskva, Gosenergoizdat, 1963. 265 p. (MIRA 16:7)  
(Electric arc) (Electric switchgear)

SMIRNOV, V.S.; KOSTENKO, M.P.; NEYMAN, L.R.; SHRAMKOV, Ye.G.; KOSTENKO, M.V.;  
KAMENSKIY, M.D.; ZAYTSEV, I.A.; KUKEKOV, G.A.; DONSKOY, A.V.

A.M. Zalesskii on his 70th birthday. Elektrichestvo no<sup>1</sup>2:94 F  
'63. (MIRA 16:5)  
(Zalesskii, Aleksandr Mikhailovich, 1892-)

KUKEROV, G.A.

Characteristics of an air leakage process in the arc quencher  
of an air-filled switch. Elektricheskoe no. 531-54 Ja'64  
(MIRA 1237)

1. Leningradskiy politekhnicheskii institut imeni M.F. Khval'skogo.

KUKEROV, G.A., kand. tekhn. nauk (Leningrad); SHISHMAN, D.V., kand.  
tekhn. nauk (Leningrad); BUKIR', P.P., inzh. (Leningrad);  
ROZET, V.Ye., inzh. (Leningrad)

Spark gaps with electromagnetic narrow-slot arc querchers for  
a.c. valve dischargers. Elektrichestvo no.12:58-60 D '64.  
(MIRA 18:12)

L 00372-66 EWT(d)/EED-2/EWP(1) IJP(c) BB/GG/GS

ACCESSION NR: AT5013568

UR/0000/64/000/000/0209/0212

AUTHOR: Kukekov, V. G. <sup>44</sup>

TITLE: Digital parallel-action integrator <sup>166, 14</sup>

SOURCE: AN SSSR, Institute elektromekhaniki <sup>44</sup>, Avtomatika, telemekhanika i priborostroyeniye (Automatic control, remote control, and instrument manufacture). Moscow, Izd-vo Nauka, 1964, 209-212

TOPIC TAGS: digital integrator, adder, information processing, digital system

ABSTRACT: The present article discusses the operating principles of a parallel-action digital integrator operating in single strokes. It consists of two parallel-action adders each of which carries out the operation

$$x_i = x_{i-1} + y_{i-1} + \Delta y_i$$

The information enters each adder through a key. The information is processed by one adder and is then stored in the other. The integrator described can, upon channel rearrangement, operate with the binary as well as ternary code system. Orig. art. has:

Card 1/2

L 00372-66

ACCESSION NR: AT5013568

5 formulas and 3 figures.

ASSOCIATION: None

SUBMITTED: 24Oct64

ENCL: 00

SUB CODE: DP

NO REF SOV: 000

OTHER: 000

Card

2/2

KUKEL', A.S.

FD-1536

USSR/Medicine - Blood Transfusion

Card 1/1 : Pub 102-7/14

Author : Kukel', A. S.

Title : The profile and training of a physician for duty at a blood transfusion station

Periodical : Sov. zdrav., 6, 33-38, Nov-Dec 1954

Abstract : Collection, storage, and transfusion of blood was originally in the hands of specialists in surgery since transfusion was considered a surgical operation. New methods in hemotherapy and increased recourse to transfusion made it imperative that blood transfusion stations be organized. It thus became necessary to train other branches of medicine in collection, storage, and transfusion so that they would be able to take charge of the stations. Diagrams.

Institution : Central Order of Lenin Institute of Hematology and Blood Transfusion  
(Director, Prof A. A. Bagdasarov, Corr Memb Acad Med Sci USSR)

Submitted :

KUKEL', A.S.; SOBOLEV, A.D.

Echinococcus of the fibula. Khirurgiia, no.11:81 N '55. (MLRA 9:6)

1. Iz Tsentral'nogo instituta gematologii i perelivaniya krovi.  
(FIBULA--HYDATIDS)



KUKEL', A.S.; SAZONOVA, G.Z.

Comparative evaluation of absorbable hemostatic preparations.  
Probl.genet. i perel.krovi 4 no.4:53-56 Ap '59.

(MIRA 12:6)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i  
perelivaniya krovi (dir. - deystvitel'nyy chlen AMN SSSR  
prof. A.A.Bagdasarov) Ministerstva zdavookhraneniya SSSR.

(HEMOSTATICS,

comparison of various absorbable prep. (R<sub>12</sub>))

KUKEL', A. S., Doc Med Sci (diss) -- "Hemotherapy in suppurative surgical wounds". Moscow, 1960. 22 pp (Second Moscow State Med Inst im N. I. Pirogov), 350 copies (KL, No 14, 1960, 136)

LORIYE, Yu.I.; KUKEL', A.S.; UMNOVA, M.A.

Immediate and late results of treating chronic hemolytic anemias.  
Probl.gemat.i perel.krovi 5 no.1:40-46 Ja '60. (MIRA 14:6)

1. Iz TSentral'nogo ordena Lenina instituta gematologii i perelivaniya  
krovi (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A.Bagdasarov)  
Ministerstva zdravookhraneniya SSSR.  
(ANEMIA) (SPLEEN SURGERY)

KUKEL', A.S.

Posttransfusion reactions in patients with purulent surgical diseases.  
Probl. gemat. i perel. krovi 5 no. 5:45-47 My '60. (MIRA 14:1)  
(BLOOD--TRANSFUSION)

KUKEL', A.S.

Change in the antitoxic and carbohydrate function of the liver following hemotherapy in patients with suppurative surgical diseases. Probl.gemat.i perel.krovi no.8:47-49 '61.

(MIRA 14:9)

1. Iz khirurgicheskoy kliniki (zav. - prof. D.M. Grozdov)  
TSentral'nogo ordena Lenina instituta gematologii i perelivaniya  
krovi (dir. - deystvitel'nyy ohlen AMN SSSR prof. A.A. Bagda-  
sarov) Ministerstva zdravookhraneniya SSSR.  
(LIVER) (BLOOD AS FOOD OR MEDICINE) (ABSCESS)

KUKEL', A.S.

Hemotherapy of renal complications in patients with suppurative surgical diseases. Probl.gemat.i perel.krovi no.2:42-44 '62.  
(MIRA 15:1)

1. Iz khirurgicheskoy kliniki (zav. - prof. D.M. Grozdov) Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (dir. - dotsent A.Ye. Kiselev) Ministerstva zdravookhraneniya SSSR.

(KIDNEYS—DISEASES) (BLOOD AS FOOD OR MEDICINE)

KUKEL', A.S. (Moskva, I-53, ul. Dokuchayeva, d.14, kv.7)

Hemotherapy in the compound treatment of purulent surgical diseases. Vest. khir. 70 no.6:3-8 Je'63 (MIRA 16:12)

1. Iz khirurgicheskoy kliniki (zav. - prof. D.M.Grozdon) Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi.

KUKEL', E., mayor

For the skillful and effective guidance of socialist competition.  
Komm.Vooruzh.Sil 2 no.2:33-37 Jg '62. (MIRA 15:3)  
(Russia--Air force) (Socialist competition)



ORLOVA, N.V.; NAUMOVA, L.P.; KUKEL' Yu.P.

Hygienic evaluation of potatoes harvested from fields treated  
with chlordan [with summary in English]. Vop.pit. 17 no.6:49-53  
N-D '58. (MIRA 12:2)

1. Iz otdela pishchevoy gigiyeni (zav. - prof. F.Ye. Budagyan)  
Instituta pitaniya AMN SSSR, Moskva.

(CHLORDAN, toxicity,  
evaluation of potatoes harvested from pretreated  
fields (Rus))

(POTATOES,  
toxicol. evaluation of potatoes harvested from  
chlordan-pretreated fields (Rus))

SHILLINGER, Yu. I., kand. med. nauk; KUKEL', Yu. P., mladshiy nauchnyy sotrudnik

Hygienic evaluation of cereals and fields treated with 2,4-D butyl ester. Gig. i san. 24 no.5:25-31 My '59. (MIRA 12:7)

1. Iz otdela pishchevoy gigiyeny Instituta pitaniya AMN SSS<sup>d</sup>.

(HERBICIDES, effects,

2,4-D butyl ester, organic changes in animals fed treated cereals (Rus))

(CEREALS,

2,4-D butyl ester treated cereals, eff. on animal organs (Rus)

VASIL'YEVA, Ye.N.; OKUNEVA, L.A.; KUKEL', Yu.P.

Hygienic study of grain irradiated with radioactive cobalt. Vop.  
pit. 19 no. 5:59-61 S-0 '60 (MIRA 14:2)

1. Iz otdela gigiyeny pitaniya (zav. - dotsent B.D. Vladimirov)  
Instituta pitaniya AMN SSSR, Moskva.  
(GRAIN) (COBALT—ISOTOPES)

RUBINSHTEYN, Yu.I.; ORLOVA, N.V.; BOGORODITSKAYA, V.P.; KUKEL', Yu.P.;  
AKINCHEVA, M.Ya.; KERBER, Ye.V.

Hygienic studies on codfish treated with biomycin. Vop. pit. 19  
no. 6:55-60 N-D '60. (MIRA 13:10)

1. Iz otdela gigiyeny pitaniya (zav. 7 dotsept B.D. Vladimirov)  
Instituta pitaniya AMN SSSR, Moskva.  
(FISH AS FOOD) (AUREOMYCIN)

KUKEL', Yu.P.

Shock reactions to penicillin in rabbits. Arkh. pat. 22 no. 6:40-43  
'60. (MIRA 14:1)

(PENICILLIN) (SHOCK)

VASIL'YEVA, Ye.N., kand.biologicheskikh nauk; OKUNEVA, LA., kand.med.nauk;  
KUKEL', Yu.P., nauchnyy sotrudnik

Hygienic evaluation of grain irradiated with radiocobalt. Trudy  
VNIIZ no.38:115-121 '60. (MIRA 15:12)

1. Institut pitaniya Akademii meditsinskikh nauk SSSR.  
(Wheat) (Gamma rays)

KUKEL', Yu. P. (Moskva)

Is it advisable to use penicillin for prophylactic purposes?  
Vop. pit. 20 no.6:77-78 N-D '61. (MIRA 15:6)  
(PENICILLIN)

KUKEL', Yu.P.

Mechanism of epithelial desquamation of the villi in the small intestine. Biul. eksp. biol. i med. 55 /i.e. 56/ no.10: 2200  
0\*63 (MIRA 17:8)

1. Iz Instituta pitaniya ( dir. - chlen-korrespondent AMN  
SSSR prof. A.A. Pokrovskiy) AMN SSSR. Predstavlena deystvitel'-  
nym chlenom AMN SSSR V.V. Parinym.



RUBINSHTEYN, Yu.I. [deceased]; ORLOVA, N.V.; BOGORODITSKAYA, V.P.;  
KUKEL', Yu.P.; AKINCHEVA, M.Ya.; KERBER, Ye.V.;  
MOISEYENKO, V.Sh.

Hygienic evaluation of meat treated with antibiotics to prolong  
the period of its preservation. Vop. pit. 22 no.3:51-55 My-Je '63.  
(MIRA 17:8)

1. Iz otdela gigiyeny (zav. - dotsent B.D. Vladimirov) Instituta  
pitaniya AMN SSSR i laboratorii antibiotikov (zav. - kand.  
biolog. nauk V.I. Krasikova) Vsesoyuznogo nauchno-issledovatel'-  
skogo instituta myasnoy promyshlennosti, Moskva.

BEL'SKIY, A.Ye.; KUKLEVA, T.A.

Investigating the movement of motor vehicles on mountain roads  
with prolonged upgrades. Avt. prom. 31 no.9:18-19 S '65.

(MIRA 18:9)

1. Khabarovskiy politekhnicheskii institut.

KUKELI, M.

Textile printing with diazo colors.

p. 5 (Teknika) Vol. 4, No. 4, July/Aug. 1957. Tirane, Albania

SO: Monthly Index of East European Accessions (EEAI) LC, - Vol. 7, No. 1, Jan. 1958

KUKELI, M.

Textile printing. p. 10

TEKNIKA. (Ministria Industri-Miniera dhe Ndertim-Komunikacion) Tirane, Bulgaria.  
(Issued by the Ministry of Industry and Mining and the Ministry of Construction  
and Communication. Bimonthly) Vol.6, no. 2, Mar./ Apr. 1959

Monthly List of East European Accessions (EEAI), IC, Vol. 8, no. 11, Nov. 1959  
Uncl.

KUKELKO, N., inzhener.

Who is guilty? Izobr. v SSSR 2 no.3:43 Mr '57.

(MLRA 10:3)

1. Byuro ratsionalizatsii i izobretatel'stva Stalinskogo Mashino-  
stroitel'nogo zavoda imeni 15-letiya Leninskogo kommunisticheskogo  
soyuza molodezhi Ukrainy.

(Inventions)

KUKENTIS, D. P.

"Brucellosis of animals and the measures of the struggle against it."  
Vilnius, State Politico-Scientific Publication, 1953, 92 pages with illustrations.  
In Lithuanian.

"Laboratory methods of examination in veterinary medicine," Moscow,  
Agricultural Publishing House, 1953, 588 pages with illustrations.

SO: Veterinariya; Vol. 31; No. 2; February 1954 Unclassified. (TABCON)

KUKENIS, D. P.

Kukenis, D. P. "The effect of the duration of motion and feeding system on the productivity and certain physiological properties of pigs." Min Higher Education USSR. Lithuanian Agricultural Academy. Kaunas, 1956. (Dissertation for the Degree of Candidate in Agricultural Science)

So: Knizhnaya letopis', No. 27, 1956. Moscow. Pages 94-109; 111.

BOOK EXPLOITATION

621.396.982.6

Kukes, Il'ya Semenovich; Starik, Mark Yevseyevich

Principles of radio direction finding (*Osnovy radiopelengatsii*), Moscow, Izd-vo "Sovetskoye radio", 1964. 640 p. illus., biblio., index. Errata slip inserted.

Radio direction finder, direction finding, antenna, antenna theory, non-linear magnetic field, parameter

**ABSTRACT:** The book sets forth the principles and methods of radio direction finding. Various radio direction finding systems are described, and the construction of them and their antenna systems are treated. Also, the errors of radio direction finding are discussed, and the methods of their reduction and employment are given.

**radio direction finders.** It can also be used by students and radio engineers as a handbook for designing different radio direction finding systems. Finally, it can be used by technical personnel who operate radio direction finding

Card 1/3



and carry out the organization of its employment. In general, the  
of a wide circle of radio direction finding.

TABLE OF CONTENTS (abridged).

Foreword --	3
Ch. I. The problems of radio direction finding --	5
Ch. II. Principles and methods of radio direction finding --	11
Ch. III. Antenna systems for the radio direction finder --	20
of terrain and environment --	215
of the radio direction finder which are related to location	
of the radio direction finder --	411
of the radio direction finder --	511
of the radio direction finder --	540
of the radio direction finder --	571

Cont 2/3

AMJ010320

Ch. XII. Plotting radio directions on the map -- 598  
Supplement I. Calculating the frame's parameters -- 609  
Supplement II. Deducing formulae for magnetic fields in the multicoll goniometer  
-- 614  
Supplement III. General expressions for parameters of the elliptical field -- 616  
Supplement IV. Determining the direction of the true meridian -- 619  
Bibliography -- 622  
Subject index -- 632

SUB CODE: NG, EC

SUBMITTED: 26Sep64

NO REF SCV: C83

OTHER: 088

Card 3/3

*ANALYSIS*  
KUKHS, V.G., student

Determining serum and urine proteins by electrophoresis on paper for patients with various kidney diseases. Lab. delo 3 no.5:48-51 S-O '57.  
(MIRA 11:2)

1. Iz laboratorii propedevticheskoy terapevticheskoy kliniki (dir. - prof. V.Kh.Vasilenko) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

(URINE--ANALYSIS AND PATHOLOGY)

(BLOOD PROTEINS) (ELECTROPHORESIS)

KUKES, V.G., VOL'FSDORF, N.Yu. (Magadan)

Two cases of idiosyncrasy to penicillin. Klin.med. 36 no.11:146-147  
N '58 (MIRA 11:12)

1. Iz Magadanskoy oblastnoy bol'nitsy (glavnyy vrach G.V. Dugayeva)  
i Magadanskogo oblastnogo venerologicheskogo dispansera (glavnyy  
vrach - kand.med.nauk S.S. Orlov):  
(PENICILLIN, inj.eff.  
hypersensitivity (Rus))

KUKES, V.G.; VLASOVA, M.I.

Some data on the content of cholesterol in the blood serum and  
the content of vitamin C in the blood plasma of the native  
inhabitants of Magadan Province. Probl. Sev. no.6:130-133 '62.  
(MIRA 16:8)

1. Pervyy moskovskiy meditsinskiy institut.  
(CHOLESTEROL) (ASCORBIC ACID)  
(MAGADAN PROVINCE—BLOOD—ANALYSIS AND CHEMISTRY)

KUKES, V.G.; VLASOVA, M.N.

Content of vitamin C in the blood plasma and in some food products consumed by the native population of the Far North.  
Vop. pit. 22 no.3:64-67 My-Je '63. (MIRA 17:8)

1. Iz kafedry propedavticheskoy terapii (zav. -- deystvitel'nyy chlen AMN SSSR prof. V.Kh. Vasilenko) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova i Magdanskoy oblastnoy bol'nitsy.

KUKES, V.G.; VLASOVA, M.N.

Content of cholesterol in the blood serum and in the diurnal  
food ration of the aboriginal population of the Far North.  
Vop. pit. 21 no.6:33-36 N-D '62. (MIRA 17:5)

1. Iz Magadanskoy oblastnoy bol'nitsy (zav. V.S. Chernikova) i  
iz kafedry propedevтики vnutrennikh bolezney (zav. - doystvitel'nyy  
chlen AMN SSSR prof. V.Kh. Vasilenko) i Moskovskogo meditsinskogo  
instituta imeni Sechenova.

KUKES, V.G. (Moskva)

Use of the blocking agent aldosterone. Klin. med. 41 no.6:  
65-69 Je '63. (MIRA 17:1)

1. Iz kafedry propedeutiki vnutrennikh bolezney (zav. -  
deystvitel'nyy chlen AMN SSSR prof. V.Kh. Vasilenko) I  
Moskovskogo ordena Lenina meditsinskogo instituta imeni  
I.M. Sechenova.



KUKES, V.O.

Methodology of determining potassium and sodium in erythrocytes  
by flame photometry. Lab.delo 8 [i.e.9] no.1:9-13 Ja '63.

(MIRA 16:5)

1. Kafedra propedevtiki vnutrennikh bolezney (zav.-prof.V.Kh.  
Vasilenko) Pervogo Moskovskogo ordena Lenina meditsinskogo in-  
stituta imeni I.M.Sechenova.

(SODIUM IN THE BODY) (POTASSIUM IN THE BODY)

(ERYTHROCYTES) (FLAME PHOTOMETRY)

L 28320-66 EWT(1)/T IJP(c) GG/AT

ACC NR: AP6013084

SOURCE CODE: UR/0048/66/030/004/0695/0697

AUTHOR: Vale, G.K.; Zolotarev, G.K.; Kuketayev, T.A.; Lushchik, N.Ye.; Lushchik, Ch.B. 37  
B

ORG: none

TITLE: Activator traps for electrons and holes in ionic crystals /Report, Fourteenth Conference on Luminescence held in Riga 16-23 September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 695-697

TOPIC TAGS: crystal phosphor, alkali halide, recombination luminescence, ionic crystal electron trap

ABSTRACT: The stated purpose of the paper is to summarize the results obtained at Tartu (Institute of Physics and Astronomy of the Estonian SSR Academy of Sciences) in studies aimed at elucidating the role of activator ions in formation of electron and hole traps. The basic experimental data were obtained in investigating different alkali halide crystals activated by  $Ga^+$ ,  $In^+$ ,  $Tl^+$ ,  $Ge^{2+}$ ,  $Pb^{2+}$ ,  $Cu^+$  and  $Ag^+$  ions. A general discussion of the luminescence centers in such phosphors has been published elsewhere (N.E.Lushchik and Ch.B.Lushchik, Tr. In-ta fiz. i astron. AN EstSSR, No. 6, 5, 1957). It is noted that the character of traps formed by activators is determined primarily by the charge of the activator ion. For example,  $Bi^{3+}$  ions are readily reduced to  $Bi^{2+}$  and trap an electron in the process. Analogously  $Ge^{2+}$ ,  $Sn^{2+}$  and  $Pb^{2+}$  ions in a KCl lattice act as effective electron traps. A number of other cases of

Card 1/2

L 28320-66

ACC NR: AP6013084

0

effective electron trapping are mentioned with references to the papers describing the corresponding investigations. Mention is made of decomposition of atomic centers in ionic crystals, and a table gives the values of the decomposition temperature for atomic Ag, Tl and Cu in different alkali halides. The question is then raised whether activator centers in the same systems are also capable of trapping holes. Recent electron paramagnetic resonance studies and optical experiments indicate that silver at any rate is capable of forming hole traps in alkali halide crystals. Reference is made to other studies and it is concluded that as a rule (and not as an exception) activator luminescence centers in alkali halide crystals are capable of trapping both electrons and holes, so that in many cases in alkali halide crystal phosphors luminescence of activator centers is observed as a result of both recombination of electrons with trapped holes and as a result of recombination of holes with trapped electrons. Orig. art. has: 1 table.

SUB CODE: 20/

SUM DATE: 00/

ORIG REF: 017/

OTH REF: 003

Card 2/2 CC